

# Using DHCP options to define SIP server address

This technical bulletin explains how to configure your Spectralink 84-Series handsets and DHCP server to support SIP server address configuration via DHCP.

## System Affected

Spectralink 84-Series Handsets

## Description

The Spectralink 84-Series Handsets currently support the use of DHCP to configure the SIP server address for your line registration. This document explains how to use DHCP options to perform this configuration and what some of the limitations are for using this functionality.

## Handset Configuration

There are only three parameters need on the handset to configure the use of DHCP options to define the SIP server address. You will need to provide the handset with all three of these parameters in order for it to leverage DHCP options for the SIP server address. Depending on your specific deployment model and needs, you could potentially place these parameters in a site level/global level configuration file or potentially at a user or group level.

Parameter	Permitted Values	Default
voIpProt. server. dhcp. available	0 or 1	0
If 0, do not check with the DHCP server for the SIP server IP address. If 1, check with the server for the IP address.		
voIpProt. server. dhcp. option	128 to 254	128
The option to request from the DHCP server if voIpProt. server. dhcp. available= 1. <b>Note:</b> If reg. x. server. y. address is non-Null, it overrules even if the DHCP server is available.		
voIpProt. server. dhcp. type	0 or 1	0
Type to request from the DHCP server if voIpProt. server. dhcp. available is set to 1. If this parameter is set to 0, IP request address. If set to 1, request string.		

By using these three parameters you can then define in your DHCP server the option for either the IP address or a hostname for the SIP server. But using the DHCP option type of string you can define a SIP server address that points to a DNS NAPTR record or SRV record that would provide you with multiple server addresses. By using the DHCP option type of IP you are limited to a single SIP server address.

## Configuring DHCP Options

This next section will be all about setting up the DHCP side of things. We're going to focus exclusively on setting up a Windows Server DHCP option. But you should be able to adapt these steps to whatever DHCP server you are using.

First, go ahead and open up your DHCP server and expand the view until you can see the IPv4 line. Right click it and select "Set Predefined Options...". You will see a dialogue box open as show in Figure 1 below.

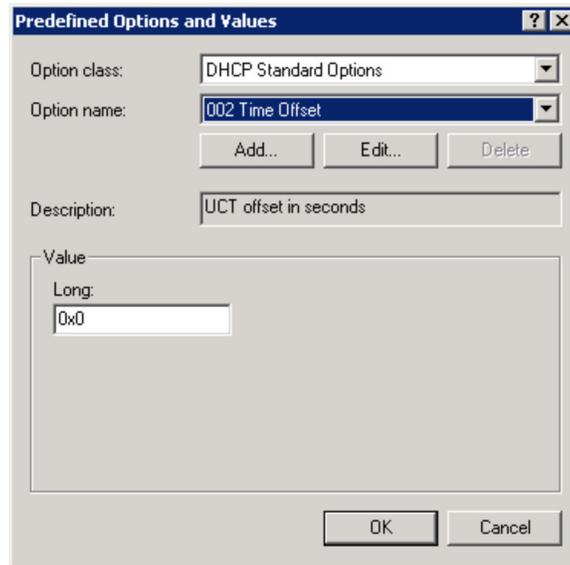


Figure 1

From here, click on the Add button. This will open another dialogue box as shown in Figure 2.

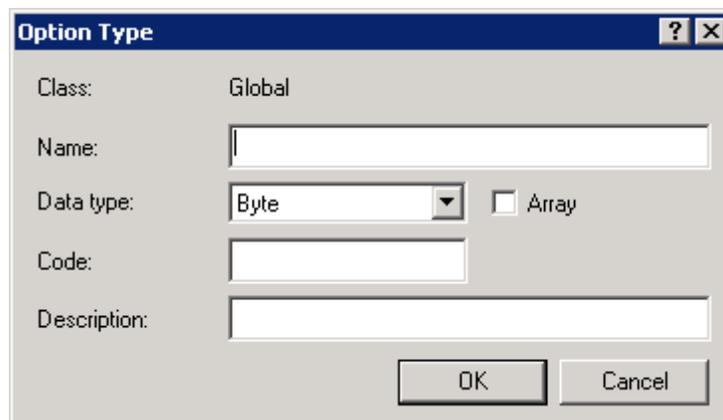


Figure 2

- In the Name field, enter a descriptive Name for this option, something like SIP-ADDR, perhaps.
- In the Data Type drop down, select either String or IP Address depending on the option you chose from the handset configuration section.
- In the Code field, enter the numeric value for this DHCP option, remember, it has to be between 128 and 254. Be sure the code you choose doesn't overlap with any existing values either or you will experience an error.
- Finally, enter a description for this DHCP option in the Description field and then click OK to finish.

Now that you've created the new DHCP option you will need to apply it to the DHCP scope that services your handsets. Within the scope you want to add this option to, expand the scope, right click Scope Options and select Configure Options.

Scroll through the list to the DHCP options until you find the one you added. This should be at or near the bottom of the list. Click the check box next to the option and highlight the line by clicking on it to allow you to edit the field. See Figure 3 below.

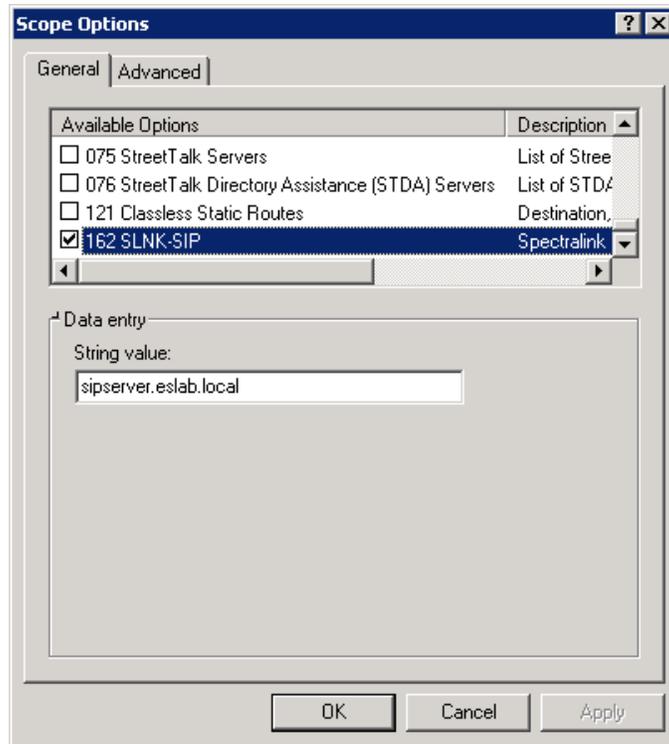


Figure 3

In the Data Entry field, enter the appropriate information based on the type you selected. If you chose IP then be sure to enter an IP address that is valid for your server. If you chose String, then enter a valid fully qualified domain name for the SIP server. In Figure 3, the string points to an NAPTR record which then segments to two separate SRV records which provides for redundancy. For details on setting up the DNS for redundancy and failover support see [Technical Bulletin CS-14-17 84-Series Failover Configuration Using DNS](#).

Once you've entered the server information you can click OK to close the dialogue box. You will now be able to see the new DHCP option displayed in the Scope Options section of the DHCP scope you configured it in, Figure 4.

Option Name	Vendor	Value	Class
002 Time Offset	Standard	0xffff9d90	None
003 Router	Standard	10.225.15.1	None
162 SLNK-SIP	Standard	sipserver.eslab.local	None

Figure 4

You should now be able to power on your handset to obtain the SIP server information via DHCP.

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## Contact Information

### US Location

800-775-5330

Spectralink Corporation  
2560 55th Street  
Boulder, CO 80301

[info@spectralink.com](mailto:info@spectralink.com)

### Denmark Location

+45 7560 2850

Spectralink Europe ApS  
Langmarksvej 34  
8700 Horsens

[infodk@spectralink.com](mailto:infodk@spectralink.com)